

We claim:

1. A controller for controlling one or more generator sets connectable to a load, each generator set having the ability to be started and stopped and including a generator communications link for connecting the generator set to a network, an engine, and a generator driven by the engine which generates AC power having a magnitude and a power factor and AC voltage having a magnitude and a frequency, comprising:

a user interface for allowing a user to select a generator set and to set values for various predetermined operating parameters of the selected generator set; and

a communications link connectable to the network for transmitting the user set values of the predetermined operating parameters to the selected generator set.

2. The controller of claim 1 further comprising a monitoring structure connectable to a utility source which provides AC power having a magnitude and a power factor, AC voltage having a magnitude and a frequency, and AC current having a magnitude and a frequency, the monitoring structure measuring the magnitude and the frequency of the AC voltage and the AC current and providing the same to the user interface for display.

3. The controller of claim 2 wherein the user interface includes a display screen for displaying the magnitudes of the AC power, AC voltage and AC current of the utility source and the power factor of the AC power of the utility source.

4. The controller of claim 2 wherein the communications link transmits the magnitude and the power factor of the AC power of the utility source and the magnitudes and frequencies of the AC voltage and AC current of the utility source to each of the generator sets connected to the network.

5. The controller of claim 1 wherein the user interface includes a display screen, the display screen displaying generator icons identifying corresponding generator sets attached to the network.

6. The controller of claim 1 wherein the user interface includes a generator settings screen for each generator set connected to the network, each generator settings screen allowing the user to input the values of a portion of the various operating parameters of the selected generator set.

7. The controller of claim 1 wherein a first of the various operating parameters is a starting time for starting the selected generator set and a second of the various operating parameters is a stopping time for stopping the selected generator set and wherein the user interface includes a generator command screen for each generator set connected to the network, each generator command screen allowing the user to input the starting time for starting the selected generator set and the stopping time for stopping the selected generator set.

8. The controller of claim 7 wherein each generator command screen includes a day setting for allowing a user to select at least one day on which the selected generator set will be started and stopped in response to the starting time and stopping time inputted by the user.

9. The controller of claim 7 wherein the user interface includes a special day screen for each generator set connected to the network, the special day screen allowing the user to input a special day on which the selected generator set will be stopped.

10. A power generation system for providing electrical power, comprising:
at least one generator set connectable to a load and to a network, each generator
set having the ability to be started and stopped and including:

5 a generator connectable to the load, the generator generating AC power
having a magnitude and a power factor, AC voltage having a magnitude
and a frequency, and AC current having a magnitude and a frequency;
an engine operatively connected to the generator for driving the generator,
the engine having an adjustable engine speed;

10 a generator control operatively connected to the engine for controlling
operation thereof and operatively connected to the generator for
controlling the AC power generated thereby; and

a generator communications link for operatively connecting the generator
control to the network;

15 a user interface for allowing a user to select a generator set and to set values for
various predetermined operating parameters of the selected generator set; and

a system communications link connectable to the network for transmitting the
user set values of the predetermined operating parameters to the generator control of the
selected generator set.

20 11. The power generation system of claim 10 further comprising a monitoring
structure connectable to a utility source which provides AC power having a magnitude
and a power factor, AC voltage having a magnitude and a frequency, and AC current
having a magnitude and a frequency, the monitoring structure measuring the magnitude
and the frequency of the AC voltage and the AC current and providing the same to the
25 user interface.

30 12. The power generation system of claim 11 wherein the user interface includes
a display screen for displaying the magnitudes of the AC power, AC voltage and AC
current of the utility source and the power factor of the AC power of the utility source.

13. The power generation system of claim 11 wherein the system communications link transmits the magnitude and the power factor of the AC power of the utility source and the magnitudes and frequencies of the AC voltage and AC current of the utility source to each of the generator controls of the generator sets connected to the network.

14. The power generation system of claim 10 wherein the user interface includes a display screen, the display screen displaying generator icons identifying corresponding generator sets attached to the network.

15. The power generation system of claim 10 wherein the user interface includes a generator settings screen for each generator set connected to the network, each generator settings screen allowing the user to input the values of a portion of the various operating parameters of the selected generator set.

16. The power generation system of claim 10 wherein a first of the various operating parameters is a starting time for starting the selected generator set and a second of the various operating parameters is a stopping time for stopping the selected generator set and wherein the user interface includes a generator command screen for each generator set connected to the network, each generator command screen allowing the user to input the starting time for starting the selected generator set and the stopping time for stopping the selected generator set.

17. The power generation system of claim 16 wherein each generator command screen includes a day setting for allowing a user to select a day on which the selected generator set will be started and stopped in response to the starting time and stopping time inputted by the user.

18. The power generation system of claim 16 wherein the user interface includes a special day screen for each generator set connected to the network, the special day screen allowing the user to input a special day on which the selected generator set will be stopped.

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19. A method of managing the distribution of electrical power, comprising the steps of:

interconnecting at least one generator set to a load and to a network, each generator set having the ability to be started and stopped;

5 selecting a generator set and setting various predetermined operating parameters for the selected generator set; and

transmitting the settings of the predetermined operating parameters over the network to the selected generator set.

10 20. The method of claim 19 comprising the additional steps of:

providing a utility source, the utility source supplying AC power having a magnitude and a power factor, AC voltage having a magnitude and a frequency, and AC current having a magnitude and a frequency;

15 measuring the magnitude and the frequency of the AC voltage and the AC current; and

displaying to a user the magnitudes of the AC power, AC voltage and AC current of the utility source and the power factor of the AC power of the utility source.

20 21. The method of claim 20 comprising the additional step of transmitting the magnitude and the power factor of the AC power of the utility source and the magnitudes and frequencies of the AC voltage and AC current of the utility source to each of the generator sets connected to the network.

25 22. The method of claim 20 comprising the additional step of displaying to a user generator icons identifying corresponding generator sets attached to the network.

30 23. The method of claim 20 comprising the additional steps of starting the selected generator set at a first predetermined time and stopping the selected generator set at a second predetermined time.

24. The method of claim 20 comprising the additional step of transmitting the first and second predetermined times to the selected generator set over the network.

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